

IN THE CLAIMS:

Rewrite the pending claims as follows:

1-34. (Canceled)

35. (Currently Amended) A computer implemented method for aggregating file systems, comprising:

coupling a group of client computers to a group of file servers through a file switch in a computer network;

at the file switch, aggregating directories of multiple file systems in a plurality of file servers in the group of file servers by presenting them as a single directory to a respective client computer in the group of client computers; and

at the file switch, aggregating file objects of the multiple file systems, each of the file objects having portions stored in different file servers, in the group of file servers by presenting them as a single file object to a respective client computer in the group of client computers.

36. (Currently Amended) A computer-implemented method for aggregating file systems, comprising:

coupling a group of client computers to a group of file servers through a file switch in a computer network; and

at the file switch, aggregating a namespace of multiple file systems in a plurality of servers in the group of file servers by:

storing a set of name-mapping rules in the file switch; wherein the set of name-mapping rules includes a first rule for mapping a first set of user path names to server path names in a first server of the plurality of servers, and a second rule for mapping a second set of user path names to server path names in a second server of the plurality of servers;

receiving a file access transaction from a client, the file access transaction including a user file name and a user path name to a file in the group of file servers;

applying the set of name-mapping rules to the user path name to generate a server path name; and

executing the file access transaction in accordance with the server path name.

37. (Previously presented) The method of claim 36, wherein the name-mapping rules comprise:

a list of predefined user path names; and
a corresponding list of mapped server path names.

38. (Currently amended) The method of claim 37, wherein the step of applying comprises:

comparing the user path name to the list of predefined user path names; and
if the user path name matches one of the predefined user path names, replacing the user path name with the corresponding mapped server path name from the list of mapped server path names.

39. (Currently amended) The method of claim 35, wherein the step of aggregating directories comprising:

receiving a file create request from a client to create a user file; [[,]] the file create request including a user file name and a user file path;
selecting a set of file servers among the group of file servers for storing the user file;
determining a server file path for each selected file server;
storing, in the file switch, information identifying the set of file servers and the file paths corresponding to the user file; and
updating the directories on the set of file servers to indicate storage of the user file.

40. (Currently amended) The method of claim 39, further comprising:

receiving a file access request from the client, the file access request including information identifying the user file;

mapping the file access request with respect to the user file into ~~at least one a plurality of file~~ [request] requests directed to ~~at least one a plurality of file~~ [server] servers in the set of file servers, the mapping including reading the information identifying the set of file servers and the server file paths corresponding to the user file; and

executing the file access request in accordance with the set of file servers and the server file paths corresponding to the user file.

41. (Previously presented) The method of claim 39, wherein the step of determining includes mapping a user file path associated with the user file into a corresponding server file path in the set of file servers in accordance with a predetermined set of mapping rules.

42. (Currently amended) The method of claim 35, wherein the step of aggregating file objects comprises:

receiving a file object update request from a client, the file object update request includes a user file name and a user file path of a user file;

selecting a set of file servers among the group of file servers in accordance with the user file name and the user file path;

determining a server file path to access file objects corresponding to the user file for each file server in the set of file servers;

storing, in the file switch, information identifying the set of file servers and the server file paths corresponding to the user file; and

updating the file objects corresponding to the user file in the selected set of file servers.

43. (Currently amended) The method of claim 42, wherein the step of aggregating file objects further comprises:

receiving a file object read request from a client, the file object read request includes the user file name and user file path;

mapping the file object read request into ~~at least one a plurality of~~ file [request] requests directed to ~~at least one a plurality of~~ file [server] servers in the set of file servers, the mapping including reading the information identifying the set of file servers and the server file paths corresponding to the user file;

retrieving file objects corresponding to the user file from ~~at least one a plurality of~~ file [server] servers in the set of file servers; and

sending the file objects retrieved to the client.

44. (Previously presented) The method of claim 42, wherein the file objects include at least two file objects selected from the set consisting of creation dates, last modification dates, file sizes, disk usage values, access control lists, security descriptors, and archive indicators.

45. (Currently amended) A file switch for use in a computer network having a group of file servers and a plurality of client computers, wherein the plurality of client computers are coupled to the group of file servers through the file switch, the file switch comprising:

at least one processing unit configured to execute computer programs;
at least one port adapted to exchange information with the file servers and client computers, the information exchanged including information concerning a specified file data; and

an aggregation module including one or more computer programs, the computer programs including instructions for:

at the file switch, aggregating directories of multiple file systems in a plurality of servers in the group of file servers by presenting them as a single directory to a respective client computer in the plurality of client computers; and

at the file switch, aggregating file objects of the multiple file systems, each of the file objects having portions stored in different file servers, in the group of file servers by presenting them as a single file object to a respective client computer in the plurality of client computers.

46. (Previously presented) The file switch of claim 45, further including instructions for aggregating a namespace of multiple file systems in the group of file servers, the namespace aggregating instructions comprising instructions for:

storing a set of name-mapping rules in the file switch;
receiving, at the file switch, a file access transaction from a client, the file access transaction including a user file name and a user path name to a file in the group of file servers;

applying, at the file switch, the set of name-mapping rules to the user path name to generate a server path name; and

executing the file access transaction in accordance with the server path name.

47. (Previously presented) The file switch of claim 46, wherein the name-mapping rules comprise:

a list of predefined user path names; and
a corresponding list of mapped server path names.

48. (Previously presented) The file switch of claim 46, wherein the instructions for applying comprise instructions for:

comparing the user path name to the list of predefined user path names; and

if the user path name matches one of the predefined user path names, replacing the user path name with the corresponding mapped server path name from the list of mapped server path names.

49. (Currently amended) The file switch of claim 45, wherein the instructions for aggregating directories comprise instructions for:

receiving a file create request from a client, the file create request including a user file name and a user file path;

selecting a set of file servers among the group of file servers for storing the user file;

determining a server file path for each selected file server;

storing, in the file switch, information identifying the set of file servers and the server file paths corresponding to the user file; and

updating the directory structure on the set of file servers to indicate storage of the user file.

50. (Currently amended) The file switch of claim 49, further comprising instructions for:

receiving a file access request from the client, the file access request including the user file name;

mapping the file access request with respect to the user file name into at least one a plurality of file [request] requests directed to at least one a plurality of file [server] servers in the set of file servers, the mapping including reading the information identifying the set of file servers and the file paths corresponding to the user file; and

executing the file access request in accordance with the set of file servers and the server file paths corresponding to the user file.

51. (Previously presented) The file switch of claim 49, wherein the instructions for determining include instructions for mapping the user file path into a corresponding server file path in the set of file servers in accordance with a predetermined set of mapping rules.

52. (Currently amended) The file switch of claim 45, wherein the instructions for aggregating file objects comprise instructions for:

receiving a file object update request from a client, the file object update request includes a user file name and a user file path of a user file;

selecting a set of file servers among the group of file servers in accordance with the user file name and the user file path;

determining a server file path to access file objects corresponding to the user file for each file server in the set of file servers;

storing, in the file switch, information identifying the set of file servers and the file paths corresponding to the user file; and

updating the file objects corresponding to the user file in the selected set of file servers.

53. (Currently amended) The file switch of claim 52, wherein the instructions for aggregating file objects further comprise instructions for:

receiving a file object read request from a client, the file object read request includes the user file name and user file path;

mapping the file object read request into ~~at least one a plurality of~~ file [request] ~~requests~~ directed to ~~at least one a plurality of~~ file [server] ~~servers~~ in the set of file servers, the mapping including reading the information identifying the set of file servers and the server file paths corresponding to the user file;

retrieving file objects corresponding to the user file from ~~at least one a plurality of~~ file [server] ~~servers~~ in the set of file servers; and

sending the file objects retrieved to the client.

54. (Previously presented) The file switch of claim 52, wherein the file objects include at least two file objects selected from the set consisting of creation dates, last modification dates, file sizes, disk usage values, access control lists, security descriptors, and archive indicators.

55. (Currently amended) A file switch for use in a computer network having a group of file servers and a plurality of client computers, wherein the plurality of client computers are coupled to the group of file servers through the file switch, the file switch comprising:

at least one processing unit configured to execute computer programs;

at least one port adapted to exchange information with the file servers and client computers, the information exchanged including information concerning a specified file data; and

an aggregation module including one or more computer programs, the computer programs including instructions for aggregating a namespace of multiple file systems in a plurality of servers in the group of file servers, the namespace aggregating instructions comprising instructions for:

storing a set of name-mapping rules in the file switch; wherein the set of name-mapping rules includes a first rule for mapping a first set of user path names to server path names in a first server of the plurality of servers, and a second rule for mapping a second set of user path names to server path names in a second server of the plurality of servers;

receiving, at the file switch, a file access transaction from a client, the file access transaction including a user file name and a user path name to a file in the group of file servers;

applying, at the file switch, the set of name-mapping rules to the user path name to generate a server path name; and

executing the file access transaction in accordance with the server path name.